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(54) **SYSTEM, DEVICES AND METHODS FOR USE IN PROXIMITY-BASED NETWORKING**

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(57) **ABSTRACT**

In general, the present invention provides in one aspect thereof a device for proximity-based communication between the device and at least a second device. The device preferably includes: a communication unit adapted to communicate between the first device and the second device in a wireless manner; a network layer that includes a communication specification for communicating information between the device and the second device through the communication unit, the network layer being adapted to determine or detect physical proximity between the device and the second device and communicate information regarding detection of physical proximity between the device and the second device or a lack of detection of physical proximity between the device and the second device; a PAN Cell Management layer that receives the physical proximity information from the network layer over time, the PAN Cell Management layer translating the physical proximity detection information received over time into time- and proximity-based events; and an application layer including a memory in which at least one computer application is stored, the PAN Cell Management layer communicating information of occurrence of at least one of the proximity-based events to the computer application so that the computer application can perform a task programmed to be performed on occurrence of the one of the proximity-based events.

19 Claims, 7 Drawing Sheets